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2017

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Learning Styles of Students Enrolled in Fashion Classes:
Academic Level, Geographic Region, and Major

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Keywords: Learning, Styles, VARK, Students

Introduction: A learning style is the “general approach ... that students use in acquiring a new language or in learning any other subject” (Celce-Murcia, 2001, p. 3). Learning styles might be impacted by a learner’s environment. For example, in recent years, a transition from physical interaction to virtual learning has contributed to a reading/writing learning orientation because lectures have shifted from verbal speech to online text (Fleming & Baume, 2006). A student’s major and educational experiences also might impact learning style. When investigated, Alkhasawneh et al. (2008) found nursing students generally preferred reading/writing learning style. However, these scores changed after the researchers provided these students with different learning experiences.

Significance: Gilakjani (2012) noted students learn with more ease when they are paired with an instructor with the same learning style. Rather than attempt new methods or identify optimal instructional methods for students, instructors tend to use the teaching methods they were exposed to during their education (e.g., Gilakjani). A miss-match between teacher/student in learning style results in lower grades and self-esteem, and a lack of information retention (Kumar & Chacko, 2010). Assessing students’ learning styles enables teachers to use techniques that complement students’, potentially enhancing students’ educational experiences.

Purpose and research questions: The purpose of this research was to examine learning styles among undergraduate students enrolled in fashion classes. Learning style was defined using four learning styles including Visual, Auditory, Reading/Writing, and Kinesthetic (VARK) (The VARK Questionnaire, 2014). The research questions were; Among students enrolled in fashion classes how do VARK scores vary by: 1) region (Midwest, Northeast)? 2) level in school (Freshman, Sophomore, Junior, Senior)? and 3) major (Apparel Design, Fashion Merchandising, Double Major, and Fashion Minor)?

Methods: Subjects recruited were enrolled in fashion classes at a Midwestern and a Northeastern university in the United States. The survey included demographics and the VARK questionnaire. Permission to use the VARK© Copyright Version 7.8 (2014) survey was acquired from VARK Learn Limited, Christchurch, New Zealand. Leite, et al. (2010) provided data and support to the validity of the VARK questionnaire. After approval from the IRB (# 735378-1), the survey was distributed to students online and in fashion classes. Researchers attended mainly textiles classes to introduce and monitor completion of the survey.

Results: Most of the usable surveys (N =213) were completed by females (N1 = 192; 91.8%). The highest VARK mean score was Kinesthetic ($\bar{X} = 7.68$), followed by Auditory ($\bar{X} = 6.72$), then Visual ($\bar{X} = 5.95$), and, finally, Reading/Writing ($\bar{X} = 5.76$).

1) *How do the VARK learning style scores vary by region?*

- Midwestern (n1 = 121) and Northeastern (n2 = 92)
- Significant difference was found between Midwestern ($\bar{X} = 6.23$) and Northeastern ($\bar{X} = 7.38$) on VARK Auditory/Aural score (p2 = .009)
- Significant difference was found between Midwestern ($\bar{X} = 5.36$) and Northeastern ($\bar{X} = 6.28$) on VARK Read/Write score (p3 = .041).

2) *How do VARK learning styles vary by level in school?*

- Freshman (n1 = 58), Sophomore (n2 = 83), Junior (n3 = 40), Senior (n4 = 32)
- Holistically, one-way ANOVA failed to identify any significant difference on average score between the students' class standings.
- Using Scheire-Ray-Hair test, there was a significant interaction effect between class standing and region on Kinesthetic. Northwestern students increased while the Midwestern decreased in Kinesthetic scores with more education.
- Using the Scheirer-Ray-Hair test, there were significant main effect of class standing and of region on Auditory, Reading/Writing and VARK. Northwestern students were consistently higher than Midwestern students in means scores.

3) *How do VARK learning styles vary by major?*

- Fashion Merchandising (n1 = 99), Fashion Design (n2 = 51), Fashion Minor (n3 = 22), Other (n4 = 38), Double Major (n5 = 3)
- The one-way ANOVA failed to identify any significant difference on average score between students' degree pursued and VARK.
- The robust test of equality of means showed significant difference (p1 = .017) on average VARK Visual score between students grouped according to degree pursued. The corresponding Post Hoc analysis found significant mean difference between Fashion/Apparel Design ($\bar{X} = 6.41$) and Fashion Minor ($\bar{X} = 4.41$); and between Fashion Merchandising ($\bar{X} = 6.07$) and Fashion Minor ($\bar{X} = 4.41$) with $p \leq 0.05$.

Discussion, Conclusions, and Implications: The results demonstrated students enrolled in fashion courses were kinesthetic in learning style. Supporting previous research that suggests previous experience influences learning styles (Fleming & Baume, 2006), region swayed learning style. Students earning a fashion minor had low visual scores, confirming the visual nature of fashion and the influence of academic major on learning style (Alkhasawneh et al., 2008). These findings can help instructors better meet the needs of students enrolled in fashion classes. For example, fashion instructors could incorporate hands-on class experiences for fashion students and limit visual exercises for minor students. The number of respondents within each sub category was limited. Therefore, more fashion students in different regions could be surveyed.

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